

Claims

1. A spark gap arrester in which two conical or columnar discharge electrodes are arranged to face each other in a cylindrical metal case, characterized in that plural magnetic material metal rings concentric with the discharge electrodes are arranged on an outer periphery of the discharge electrodes as arc-suppressing plates.
2. The arrester as claimed in claim 1, characterized in that distal end parts and proximal parts of the two discharge electrodes are made of different conductive materials, and only the material of the distal end parts has heat resistance and arc resistance.
3. The arrester as claimed in claim 2, characterized in that a recessed part or a protruding part is provided at the proximal parts of the two discharge electrodes, and the recessed part or protruding part and the protruding part or recessed part of the discharge electrode are fitted and connected with each other.
4. The arrester as claimed in one of claims 1 to 3, characterized in that the two discharge electrodes are covered with an organic arc-suppressing insulating material, except for the distal end parts and the proximal parts.
5. The arrester as claimed in one of claims 1 to 4, characterized in that a recessed part is provided on each of end surfaces facing each other of the two discharge electrodes,

and an insulator is inserted across the two recessed parts, and a spark gap dimension is defined by the difference between the sum of depths of the two recessed parts and thickness of the insulator.

6. The arrester as claimed in one of claims 1 to 5, characterized in that a ring-shaped disc made of an organic arc-suppressing insulating material is inserted as a spacer between the plural ring-shaped magnetic material metal discs, and the spacer has a step-like sectional shape in order to fix the positions of the arc-suppressing plates and electrically insulate each arc-suppressing plate from the metal case.

7. The arrester as claimed in one of claims 1 to 6, characterized in that the arc-suppressing plates are arranged over a part that is not covered with the organic arc-suppressing insulating material between the distal end parts and the proximal parts of the electrodes on both sides.

8. The arrester as claimed in one of claims 1 to 7, characterized in that the organic arc-suppressing insulating material is a composite material containing an inorganic reinforcement.

9. The arrester as claimed in one of claims 1 to 8, characterized in that an air gap is provided in order to reduce residual magnetism of the magnetic material metal rings used as arc-suppressing plates.